QUANTIZATION MATRICES FOR DIGITAL AUDIO
ABSTRACT

Quantization matrices facilitate digital audio encoding and decoding. An audio encoder generates and compresses quantization matrices; an audio decoder decompresses and applies the quantization matrices. The invention includes several techniques and tools, which can be used in combination or separately. For example, the audio encoder can generate quantization matrices from critical band patterns for blocks of audio data. The encoder can compute the quantization matrices directly from the critical band patterns, which can be computed from the same audio data that is being compressed. The audio encoder/decoder can use different modes for generating/applying quantization matrices depending on the coding channel mode of multi-channel audio data. The audio encoder/decoder can use different compression/decompression modes for the quantization matrices, including a parametric compression/decompression mode.